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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/540,463

06/23/2005

Roger Griffiths

21.1068

2771

23718

7590

02/16/2007

SCHLUMBERGER OILFIELD SERVICES

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SUGAR LAND, TX 77478

EXAMINER

LE, TOAN M

ART UNIT

PAPER NUMBER

2863

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

02/16/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/540,463		GRIFFITHS, ROGER	
	<b>Examiner</b>		<b>Art Unit</b>	
	Toan M. Le		2863	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 June 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 June 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |  |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413):<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                        |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>6/23/05</u> | 6) <input type="checkbox"/> Other: _____   |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1 and 3-6 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The claims are directed to a judicial exception; as such, pursuant to the Interim Guidelines on Patent Eligible Subject Matter (MPEP 2106), the claims must have either physical transformation and/or a useful, concrete and tangible result. Although, the claims appear useful and concrete, there does not appear to be a tangible result claimed. Merely, obtaining first log data acquired by a logging sensor (8, 5, 6, 3) during a first pass over the wellbore interval; obtaining second log data at a time later than the first log data, said second log data being acquired by the logging sensor during a second pass over the wellbore interval; calculating a plurality of delta values between the first log data and the second log data; deriving an observed effect using the plurality of the delta values; and identifying a correlation between the observed effect and a causal event would not appear to be sufficient to constitute a tangible result, since the outcome of the obtaining, calculating, deriving, and identifying steps have not been used in a disclosed practical application nor made available in such a manner that its usefulness in a disclosed practical application can be realized. As such, the subject matter of the claims is not patent eligible.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-15 are rejected under 35 U.S.C. 102(e) as being anticipated by Fanini et al. (US Patent No. 6,529,833).

Referring to claim 1, Fanini et al. disclose a method of evaluating changes for a wellbore interval, comprising:

obtaining first log data acquired by a logging sensor during a first pass over the wellbore interval (col. 6, lines 19-45);

obtaining second log data at a time later than the first log data, said second log data being acquired by the logging sensor during a second pass over the wellbore interval (col. 6, lines 19-45);

calculating a plurality of delta values between the first log data and the second log data (col. 8, lines 33-58);

deriving an observed effect using the plurality of the delta values (col. 7, lines 59-67 to col. 8, lines 1-18); and

identifying a correlation between the observed effect and a causal event (col. 7, lines 38-58).

As to claim 2, Fanini et al. disclose a method of evaluating changes for a wellbore interval, further comprising displaying the correlation on a display device (col. 1, lines 45-57).

Referring to claim 3, Fanini et al. disclose a method of evaluating changes for a wellbore interval, wherein the logging sensor measures at least one parameter selected from the group

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consisting of gamma ray, resistivity, neutron porosity, density, ultrasonic caliper, and sigma (col. 7, lines 7-11).

As to claim 4, Fanini et al. disclose a method of evaluating changes for a wellbore interval, wherein the logging sensor is disposed on an integrated measurement tool (col. 7, lines 7-11).

Referring to claim 5, Fanini et al. disclose a method of evaluating changes for a wellbore interval, wherein the correlation is a depth correlation (col. 6, lines 19-45).

As to claim 6, Fanini et al. disclose a method of evaluating changes for a wellbore interval, wherein the correlation is a time correlation (col. 5, lines 17-25).

Referring to claim 7, Fanini et al. disclose a method of evaluating changes for a wellbore interval, further comprising:

calculating a relative effect using a sensitivity factor to adjust the correlation (col. 7, lines 38-58); and

displaying the correlation and the relative effect on a display device (col. 1, lines 45-57).

As to claim 8, Fanini et al. disclose a system for evaluating changes for a wellbore interval comprising:

a well log data acquisition system for acquiring first log data and second log data, at a time later than said first log data, from a logging sensor during a plurality of passes over the wellbore interval (col. 6, lines 19-45); and

a well log data processing system for:

calculating a plurality of delta values between the first log data and the second log data (col. 8, lines 33-58);

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deriving an observed effect using the plurality of the delta values (col. 7, lines 59-67 to col. 8, lines 1-18); and

identifying a correlation between the observed effect and a causal event (col. 7, lines 38-58).

Referring to claim 9, Fanini et al. disclose a system for evaluating changes for a wellbore interval, further comprising a display device for displaying the correlation (col. 1, lines 45-57).

As to claim 10, Fanini et al. disclose a system for evaluating changes for a wellbore interval, wherein the logging sensor measures at least one parameter selected from the group consisting of gamma ray, resistivity, neutron porosity, density, ultrasonic caliper, and sigma (col. 7, lines 7-11).

Referring to claim 11, Fanini et al. disclose a system for evaluating changes for a wellbore interval, wherein the logging sensor is disposed on an integrated measurement tool (col. 7, lines 7-11).

As to claim 12, Fanini et al. disclose a system for evaluating changes for a wellbore interval, wherein the correlation is a depth correlation (col. 6, lines 19-45).

Referring to claim 13, Fanini et al. disclose a system for evaluating changes for a wellbore interval, wherein the correlation is a time correlation (col. 5, lines 17-25).

As to claim 14, Fanini et al. disclose a system for evaluating changes for a wellbore interval, further comprising a well log data processing system for calculating a relative effect using a sensitivity factor to adjust the correlation (col. 7, lines 38-58); and

displaying the correlation and the relative effect on a display device (col. 1, lines 45-57).

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Referring to claim 15, Fanini et al. disclose a computer system for evaluating changes for a wellbore interval, comprising:

a processor (col. 10, claim 1);

a memory;

a storage device (col. 1, lines 29-44);

a computer display (col. 1, lines 45-57); and

software instructions stored in the memory for enabling the computer system under control of the processor, to perform:

gathering first log data from a logging sensor during a first pass over the wellbore interval (col. 6, lines 19-45);

gathering second log data, at a time later than said first log data, from the logging sensor during a second pass over the wellbore interval (col. 6, lines 19-45);

calculating a plurality of delta values between the first log data and the second log data (col. 8, lines 33-58);

deriving an observed effect using the plurality of the delta values (col. 7, lines 59-67 to col. 8, lines 1-18);

identifying a correlation between the observed effect and a causal event (col. 7, lines 38-58); and

displaying the correlation on the computer display (col. 1, lines 45-57).

### ***Conclusion***

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Toan M. Le whose telephone number is (571) 272-2276. The examiner can normally be reached on Monday through Friday from 9:00 A.M. to 5:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on (571) 272-2269. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Toan Le

February 7, 2007

  
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